The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte CHRIS CIFRA, KEVIN SCHULTZ, JEFF KELLAM, JEFF
CORRELL, NICOLAS VAZQUEZ,
and CHRISTOPHE CALTAGIRONE

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Appeal 2007-1318
Application 09/726,779[1]
Technology Center 2100

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Decided: October 10, 2007

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Before ALLEN R. MACDONALD, JAY P. LUCAS, and SCOTT R.
BOALICK, *Administrative Patent Judges*.

BOALICK, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the final rejection of

claims 1, 3-14, 16-27, 29-40, and 42-59, all the claims pending in the

application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm-in-part.

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[1] Application filed November 29, 2000. The real party in interest is
National Instruments Corporation.

STATEMENT OF THE CASE

Appellants' invention relates to a system and method for automatically generating a program that includes a graphical user interface with interface controls to specify input parameter values or to view output parameter values. (Specification 2:9-13.)

Claims 1 and 48 are exemplary:

1.   A method for generating a computer program, the method comprising:

receiving user input to a prototyping application, wherein the user input specifies a prototype, wherein the prototype comprises a series of functional operations, wherein the functional operations include a first functional operation with one or more associated parameters;

automatically generating a program that implements the prototype, in response to the specified prototype, wherein the program is operable to execute independently of the prototyping application;

wherein said automatically generating the program comprises automatically generating a graphical user interface for the program;

wherein said automatically generating the graphical user interface comprises automatically creating one or more graphical user interface elements associated with the one or more parameters of the first functional operation, wherein during execution of the program, at least one of the one or more graphical user interface elements is displayed and is operable to receive

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user input independently of the prototyping application.

48.   A method for generating a computer program, the method comprising:

receiving user input specifying a prototype, wherein the prototype comprises a series of functional operations, wherein at least one of the operations has an associated one or more parameters;

in response to said receiving user input specifying the prototype, automatically generating a graphical program, wherein automatically generating the graphical program comprises automatically generating a plurality of interconnected nodes that visually indicate functionality of the graphical program, wherein the plurality of interconnected nodes are operable to perform the series of functional operations;

wherein said automatically generating the graphical program comprises automatically generating a graphical user interface for the graphical program, wherein the graphical user interface for the graphical program comprises at least one graphical user interface element which is associated with at least one of the one or more parameters;

wherein the graphical program is interpretable or compilable.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Blowers   US 6,298,474 B1   Oct. 2, 2001
                                                (filed Apr. 30, 1999)

Claims 1, 3-5, 7-14, 16-18, 20-27, 29-31, 33-40, and 42-59 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Blowers.

Claims 6, 19, and 32 stand rejected under 35 U.S.C. § 103(a) as being obvious over Blowers.

Rather than repeat the arguments of Appellants or the Examiner, we make reference to the Briefs and the Answer for their respective details. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2004).[2]

ISSUE

The issue is whether Appellants have shown that the Examiner erred in rejecting claims 1, 3-5, 7-14, 16-18, 20-27, 29-31, 33-40, and 42-59 as being anticipated by Blowers and in rejecting claims 6, 19, and 32 as being obvious over Blowers. The issue turns on whether Blowers teaches or suggests each and every limitation of the claims.

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[2] Except as will be noted in this opinion, Appellants have not presented any substantive arguments directed separately to the patentability of the dependent claims or related claims in each group. In the absence of a separate argument with respect to those claims, they stand or fall with the representative independent claim. *See* 37 C.F.R. § 41.37(c)(1)(vii).

FINDINGS OF FACT

The record supports the following findings of fact (FF) by a
preponderance of the evidence.

1. Blowers describes a system and method for interactively developing a
graphical control-flow structure and associated application software
for use in a machine vision system without the user having to write
any code. (Abstract; col. 1, ll. 21-25; col. 2, ll. 53-55.) Application
software is formed in response to user commands "without the user
writing any of the application software." (Abstract.) Rather than
writing code, Blowers teaches that the user "sets variables that the
machine vision tools require interactively." (Col. 2, ll. 54-55.)

2. Blowers teaches that "[a] design engine or task sequencer engine 46 is
used to configure and test the flow and design of the application
software as illustrated by an exemplary task sequencer list of FIG. 6."
(Col. 8, ll. 61-63; Fig. 3.) "Graphical representations or icons are
selected from the tool boxes of FIG. 5 which correspond to desired
functional tasks and are linked into the tree structure of FIG. 6 by a
task sequencer interface 50 in the desired locations." (Col. 8,
ll. 64-67; Figs. 5-6.) Parameters, which control the way the function
generates results, can be configured for each task as shown in
Figures 7 and 8. (Col. 9, ll. 7-10.) "Once the desired sequence has
been created, it can be stored or saved in a condensed method within
an inspection sequence file 52 which is usable by the engine 46."
(Col. 9, ll. 13-15.) Blowers also teaches that "[t]he engine 46 takes

the condensed stored sequence from the file 52 and executes it through the runtime screen of FIG. 9 of the runtime interface 54." (Col. 9, ll. 16-18.) The engine 46 is linked to a results engine 56 that provides results in a results interface 60. (Col. 9, ll. 18-20, 23-25; Fig. 9.)

PRINCIPLES OF LAW

On appeal, all timely filed evidence and properly presented argument is considered by the Board. *See In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

In the examination of a patent application, the Examiner bears the initial burden of showing a prima facie case of unpatentability. *Id.* at 1472, 223 USPQ at 788. When that burden is met, the burden then shifts to the applicant to rebut. *Id.*; *see also In re Harris*, 409 F.3d 1339, 1343-44, 74 USPQ2d 1951, 1954-55 (Fed. Cir. 2005) (finding rebuttal evidence unpersuasive). If the applicant produces rebuttal evidence of adequate weight, the prima facie case of unpatentability is dissipated. *In re Piasecki*, 745 F.2d at 1472, 223 USPQ at 788. Thereafter, patentability is determined in view of the entire record. *Id.* However, on appeal to the Board it is an appellant's burden to establish that the Examiner did not sustain the necessary burden and to show that the Examiner erred -- on appeal we will not start with a presumption that the Examiner is wrong.

Anticipation is established when a single prior art reference discloses expressly or under the principles of inherency each and every limitation of the claimed invention. *Atlas Powder Co. v. IRECO Inc.*, 190 F.3d 1342,

1347, 51 USPQ2d 1943, 1946 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994).

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). *See also KSR*, 127 S. Ct. at 1734, 82 USPQ2d at 1391 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls."). The Court in *Graham* further noted that evidence of secondary considerations, such as commercial success, long felt but unsolved needs, failure of others, etc., "might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented." 383 U.S. at 18, 148 USPQ at 467.

During examination of patent application, a claim is given its broadest reasonable construction consistent with the specification. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). "[T]he words of a claim 'are generally given their ordinary and customary meaning.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312, 75 USPQ2d 1321, 1326 (Fed. Cir. 2005) (en banc) (internal citations omitted). The "ordinary and customary meaning of a claim term is the meaning that the term would have

to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." *Id.* at 1313, 75 USPQ2d at 1326.

ANALYSIS

Appellants contend that Examiner erred in rejecting claims 1, 3-5, 7-14, 16-18, 20-27, 29-31, 33-40, and 42-59 as being anticipated by Blowers and in rejecting claims 6, 19, and 32 as being obvious over Blowers. Reviewing the documents of record and the findings of facts cited above, we find that the Appellants have shown that the Examiner failed to make a prima facie showing of anticipation with respect to claims 1, 3-5, 7-14, 16-18, 20-27, 29-31, 33-40, 42-47, 49, and 52-59 and failed to make a prima facie showing of obviousness with respect to claims 6, 19, and 32 because Blowers does not teach or suggest each and every limitation of these claims, as will be explained below. However, we find that the Appellants have not shown that the Examiner erred in rejecting claims 48, 50, and 51 as being anticipated by Blowers.

Independent claim 1 recites automatically generating a program "wherein the program is operable to execute independently of the prototyping application." The Examiner found that Blowers discloses that the program is operable to execute independently of the prototyping application because the machine vision system of Fig. 2 "is a separate system, which is associated with the program, created but is separate from the program and is independently executed from the machine vision system." (Answer 16.) Claim 1 also recites automatically generating a graphical user interface for the program with a graphical user interface

element that "is operable to receive user input independently of the prototyping application." The Examiner found that Blowers "teaches that the user is allowed to input during execution without interference from the prototyping application thereby showing independence." (Answer 4.)

However, because the task sequence engine 46 of Blowers is responsible for both creating and executing the program, we agree with Appellants that Blowers does not teach the claim limitations of automatically generating a program "wherein the program is operable to execute independently of the prototyping application" and automatically generating a graphical user interface for the program with a graphical user interface element that "is operable to receive user input independently of the prototyping application." (Br. 10-11; Reply Br. 4-6; FF 2.) Therefore, we agree that the Examiner erred in rejecting claim 1 as being anticipated by Blowers.

Claims 3-5, 7-13, 46-47, and 56-59 depend from claim 1, and we conclude that the Examiner erred in rejecting these claims as being anticipated by Blowers for the same reasons discussed with respect to claim 1.

Similarly to claim 1, independent claims 14, 27, and 40 recite automatically generating a program that "is operable to execute independently of" a prototyping application (or a first application as recited by claim 40) and automatically generating a graphical user interface for the program with a graphical user interface element that "is operable to receive user input independently of" the prototyping application (or the first application as recited by claim 40). Therefore, we conclude that the Examiner erred in rejecting claims 14, 27, and 40 for the reasons discussed

with respect to claim 1. Claims 16-18, 20-26, 29-31, 33-39, and 42-45 depend from one of claims 14, 27, and 40, and we conclude that the Examiner erred in rejecting these claims as being anticipated by Blowers for the same reasons discussed with respect to claims 14, 27, and 40.

Claim 53 recites, similarly to claim 1, automatically generating a graphical user interface for the program "wherein the graphical user interface of the program is independent of the prototyping environment user interface." As discussed with respect to claim 1, Blowers does not teach or suggest this limitation. Therefore, we agree that the Examiner erred in rejecting claim 53 as being anticipated by Blowers. Claim 54 depends from claim 53, and we conclude that the Examiner erred in rejecting claim 54 as being anticipated by Blowers for the same reasons discussed with respect to claim 53.

Claim 55 recites, similarly to claim 1, automatically generating a program "wherein program execution of the program is independent of execution of the development environment." As discussed with respect to claim 1, Blowers does not teach or suggest this limitation. Therefore, we agree that the Examiner erred in rejecting claim 55 as being anticipated by Blowers.

Claims 49 and 52, which depend from claims 48 and 51 respectively, recite "wherein execution of the second program instructions is independent of execution of" the development environment (or first program instruction in the case of claim 52). As discussed with respect to claim 1, Blowers does not teach or suggest this limitation. Therefore, we conclude that the Examiner erred in rejecting claims 49 and 52 as being anticipated by Blowers.

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Regarding claims 48, 50, and 51, Appellants argue that Blowers does not teach generating a graphical program *automatically*.[3] (Br. 22; Reply Br. 8-9.) Instead, Appellants contend that Blowers teaches the manual selection of icons from tool boxes. (Br. 22; Reply Br. 8-9.) Appellants also argue that the tree structure of Blowers is not executable. (Reply Br. 8.) We do not agree.

As the Examiner correctly found, Blowers teaches that a program may be generated automatically. (Answer 10-12; 23-24; FF 1-2.) The Examiner found that "Blowers has clearly avoided the user manually inputting the program and has taught that the user's role is to choose certain functional operations and parameters associated with certain functions to generate a program automatically." (Answer 23-24; FF 1.) The Examiner also found that "Blowers discloses that the task sequencer engine [46] is responsible for linking functional operations to a tree structure, thereby generating the program that is represented as the tree structure." (Answer 24; FF 2.) In addition, with respect to claim 48, the Examiner found that the graphical program taught by Blowers is interpretable or compilable.[4] (Answer 11; FF 2.) We note that the language of claim 48 merely requires the graphical program to be "interpretable" or "compilable," not "executable" as argued by Appellants. Therefore, we conclude that Appellants have not shown that the

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[3] Claims 48, 50, and 51 do not recite the limitations of automatically generating a program that "is operable to execute independently of" the prototyping application and automatically generating a graphical user interface that "is operable to receive user input independently of" the prototyping application as discussed with respect to claim 1.
[4] Claims 50 and 51 do not recite this particular limitation.

Examiner erred in rejecting claims 48, 50, and 51 as being anticipated by Blowers.

Regarding the obviousness rejections, we note that claims 6, 19, and 32 depend from claims 1, 14, and 27 respectively. As discussed with respect to claims 1, 14, and 27, we agree with Appellants that Blowers does not teach or suggest the limitations of automatically generating a program that "is operable to execute independently of" a prototyping application and automatically generating a graphical user interface for the program with a graphical user interface element that "is operable to receive user input independently of" the prototyping application, as claimed. Therefore, we conclude that the Examiner erred in rejecting claims 6, 19, and 32 as being obvious over Blowers.

CONCLUSION OF LAW

Based on the findings of facts and analysis above, we conclude that:

(1) The Examiner erred in rejecting claims 1, 3-5, 7-14, 16-18, 20-27, 29-31, 33-40, 42-47, 49, and 52-59 for anticipation under 35 U.S.C. § 102(e).

(2) The Examiner did not err in rejecting claims 48, 50, and 51 for anticipation under 35 U.S.C. § 102(e).

(3) The Examiner erred in rejecting claims 6, 19, and 32 for obviousness under 35 U.S.C. § 103.

DECISION

The rejection of claims 1, 3-5, 7-14, 16-18, 20-27, 29-31, 33-40, 42-47, 49, and 52-59 for anticipation under 35 U.S.C. § 102(e) is reversed.

The rejection of claims 48, 50, and 51 for anticipation under 35 U.S.C. § 102(e) is affirmed.

The rejection of claims 6, 19, and 32 for obviousness under 35 U.S.C. § 103 is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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